

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A metallurgical furnace comprising:
a casing of the furnace and an outer casing plate defining the casing;
a cooling plate (1, 16), consisting comprised of copper or a low-alloy copper alloy, for metallurgical furnaces provided inward of the with an outer furnace casing plate; (2), having
at least one[[,]] preferably at least two[[,]] coolant passages passage [[(5)]] which run
runs inside the cooling plate (1, 16), coolant pipe sections [[(6)]] connected with the at least one
coolant passage for enabling coolant to flow respectively in and out of the coolant passages and
the coolant pipe sections leading being led to the outside through the furnace casing plate; (2),
wherein
the cooling plate having (1, 16) is provided with holding pipes [[(7)]] thereon which are
led to the outside through the furnace casing plate [[(2)]] and which, after they have been passed
through the furnace casing plate (2), are provided with securing elements securing the holding
pipes at the casing plate; (10), in particular holding plates or holding disks, and the holding pipes
[[(7)]] and the securing elements [[(10)]] being comprised of made from a material which has an
increased strength as compared to the copper or low-alloy copper alloy of the cooling plate, and a
fixed-point securing element securing in that the cooling plate (1, 16) is connected to the furnace
casing plate (2) in a central region by means of a fixed-point securing element (12).
2. (Currently Amended) The furnace cooling plate (1, 16) as claimed in claim 1, which-
in particular with a wherein the cooling plate has a (1, 16) height/weight height/width ratio of
[[≤]] ≥ 3; [[-]] is provided with
at least one movable-point securing element [[(13)]] which is arranged at least one of
above and/or and below the fixed-point securing element [[(12)]] and the movable point securing
element is operable to allows allow mobility of the cooling plate only in the vertical direction.

3. (Currently Amended) The furnace cooling plate (1, 16) as claimed in claim 1, ~~which~~
~~in particular with a~~ wherein the cooling plate has a (1, 16) height/width ratio of < 3 ; ~~[[,]]~~
~~preferably < 2 - is provided with~~

at least one moveable-point securing element ~~[[(13)]]~~ which is arranged to at least one of
the left ~~and/or to the right of the fixed-point securing element~~ ~~[[(12)]]~~ and the movable-point
securing element is operable to allow ~~allows~~ mobility of the cooling plate only in the horizontal
direction.

4. (Currently Amended) The cooling plate (1, 16) furnace as claimed in ~~one of claims 1~~
~~to 3~~ claim 1, wherein the cooling plate ~~which~~ has tongues ~~[[(3)]]~~ and grooves on ~~the~~ a side
thereof which faces the interior of the furnace, and the tongues (3) ~~being~~ are segmented in their a
longitudinal direction of the tongues.

5. (Currently Amended) The cooling plate (1, 16) furnace as claimed in ~~one of claims 1~~
~~to 4~~ claim 1, wherein a respective one of the holding pipe (7) - in each case surrounding pipes
surrounds a coolant pipe section (6) ~~[[-]]~~ is secured, for example screwed or welded, to the
cooling plate (1, 16).

6. (Currently Amended) The cooling plate (1, 16) furnace as claimed in ~~one of claims 1~~
~~to 5~~, wherein claim 1, further comprising a connecting piece (8) ~~which is preferably formed in~~
~~the shape of a ring or a disk, is provided between~~ the holding pipe ~~[[(7)]]~~ and the respective
coolant pipe section ~~[[(6)]]~~.

7. (Currently Amended) The cooling plate (1, 16) furnace as claimed in ~~one of claims 1~~
~~to 4~~, wherein claim 1, further comprising a coolant pipe section (6) ~~is formed as a single part and~~
including is provided with a flange which is secured to the cooling plate (1, 16).

8. (Currently Amended) The ~~cooling plate (1, 16)~~ furnace as claimed in claim 7, ~~wherein~~ further comprising a holding pipe ~~[(7) -]~~ surrounding the coolant pipe section ~~[(6) -]~~ is and secured to the flange.

9. (Currently Amended) The ~~cooling plate (1, 16)~~ furnace as claimed in ~~claims 1 to 8~~ claim 1, wherein the pipe sections ~~[(6)]~~ for coolant to flow in and out are made from the same material as the cooling plate ~~[(1, 16)]~~.

10. (Currently Amended) The ~~cooling plate (1, 16)~~ furnace as claimed in ~~claims 1 to 4~~ claim 1, wherein ~~[[a]]~~ the pipe section ~~[(17)]~~ is ~~designed~~ both as a holding pipe ~~[(7)]~~ and as a coolant pipe section ~~[(6)]~~.

11. (Currently Amended) The ~~cooling plate (1, 16)~~ furnace as claimed in ~~one of claims 1 to 8~~ claim 1, wherein the pipe sections ~~(7, 17)~~ for coolant to flow in and out are made from the same material as the holding pipes ~~(7)~~.

12. (New) The furnace of claim 1, wherein at least two of the coolant passages run inside the cooling plate.

13. (New) The furnace of claim 1, wherein the securing elements are applied to the holding pipes after the holding pipes have passed through the furnace casing plate.

14. (New) The furnace of claim 1, wherein the securing elements securing the holding pipes comprise holding plates or holding disks.

15. (New) The furnace of claim 1, wherein the fixed point securing element secures the cooling plate to the furnace casing plate in a central region of the cooling plate.

16. (New) The furnace of claim 3, wherein the cooling plate has a height/width ratio of

< 2.

17. (New) The furnace of claim 5, wherein the holding pipe is secured to the cooling plate.

18. (New) The furnace of claim 17, wherein the securement of the holding pipe to the cooling plate is by screwing or welding them.

19. (New) The furnace of claim 6, wherein the connecting piece is in the form of a ring or a disk.

20. (New) The furnace of claim 1, further comprising at least one movable-point securing element which is arranged at least one of above and below the fixed-point securing element and the movable point securing element is operable to allow mobility of the cooling plate only in the vertical direction.

21. (New) The furnace of claim 1, further comprising at least one moveable-point securing element which is arranged to at least one of the left the right of the fixed-point securing element and the movable-point securing element is operable to allow mobility of the cooling plate only in the horizontal direction.

22. (New) A cooling plate for use in a metallurgical furnace having an outer furnace casing plate, the cooling plate comprising:

a plate; at least one coolant passage which runs inside the cooling plate, coolant pipe sections connected with the at least one coolant passage for enabling coolant to flow respectively in and out of the coolant passages and the coolant pipe sections leading to the outside;

the cooling plate having holding pipes thereon which are led to the outside; and

securing elements being comprised of a material which has an increased strength as compared to the copper or low-alloy copper alloy of the cooling plate for securing the cooling plate to the outer furnace casing plate.

23. (New) The cooling plate of claim 22, further comprising holding pipes on the cooling plate which are led to the outside through the furnace casing plate and securing elements securing the holding pipes at the casing plate; the holding pipes and the securing elements being comprised of a material which has an increased strength as compared to the copper or low-alloy copper alloy of the cooling plate, and a fixed-point securing element securing the cooling plate to the furnace-casing plate.

24. (New) The cooling plate of claim 22, wherein the cooling plate has a height/width ratio of ≥ 3 ;

at least one movable-point securing element which is arranged at least one of above and below the fixed-point securing element and the movable point securing element is operable to allow mobility of the cooling plate only in the vertical direction.

25. (New) The cooling plate of claim 22, further comprising at least one movable-point securing element which is arranged at least one of above and below the fixed-point securing element and the movable point securing element is operable to allow mobility of the cooling plate only in the vertical direction.

26. (New) The cooling plate of claim 22, wherein the cooling plate has a height/width ratio of < 3 ;

at least one moveable-point securing element which is arranged to at least one of the left the right of the fixed-point securing element and the movable-point securing element is operable to allow mobility of the cooling plate only in the horizontal direction.

27. (New) The cooling plate of claim 22, further comprising at least one moveable-point securing element which is arranged to at least one of the left the right of the fixed-point securing element and the movable-point securing element is operable to allow mobility of the cooling plate only in the horizontal direction.